



**American Water Works
Association**

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Eric Burneson
Director, Standards and Risk Management
Office of Ground Water and Drinking Water
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460-0001

RE: Developing a National Action Plan for Per- and Polyfluoroalkyl Substances (Docket Id. # EPA-HQ-OW-2018-0270)

Dear Mr. Burneson,

The American Water Works Association appreciates the opportunity to comment on the federal government's efforts to develop a cohesive plan for managing the risks posed by per- and polyfluoroalkyl substances. AWWA appreciates and applauds the Agency's efforts to reach out to stakeholders as it develops this plan. The information provided at the National Leadership Summit on May 22, 2018 was very helpful in understanding the federal government's efforts. PFAS in drinking water has become an important local issue in a number of states and in association with roughly 400 Department of Defense facilities, it is clearly a time for the EPA, other relevant federal agencies, states, and interested stakeholders to be working toward common goals with shared expectations for each other's efforts. Developing a National Action Plan is an important positive development.

Summary presentations made at the National Leadership Summit and similar presentations in other venues are the only publicly available information provided by EPA illustrating federal activities, consequently some of the attached comments may be redundant with efforts that are already underway.

AWWA's recommendations focus on the following topics:

- EPA's proposed actions
- Need to determine PFAS exposure risk for most Americans
- Adequate toxicology to support decision-making
- Effective mitigation of sources of harmful PFAS compounds
- Information to support engineering decisions

EPA's Proposed Actions

At the National Leadership Summit, Administrator Pruitt announced four actions that EPA would be taking to manage potential risks posed by PFAS:

- “1. EPA will initiate steps to evaluate the need for a maximum contaminant level (MCL) for PFOA and PFOS.
2. We will convene our federal partners and examine everything we know about PFOA and PFOS in drinking water.
3. EPA is beginning the necessary steps to propose designating PFOA and PFOS as “hazardous substances” through one of the available statutory mechanisms, including potentially CERCLA Section 102.
4. EPA is currently developing groundwater cleanup recommendations for PFOA and PFOS at contaminated sites and will complete this task by fall of this year.
5. EPA is taking action in close collaboration with our federal and state partners to develop toxicity values for GenX and PFBS by this summer.”¹

Today, community water systems and individual households are struggling to understand why individual states, EPA, and other agencies judge the risks posed by PFAS differently. Risk management decisions are being made that will have serious long-term costs for individual households. Managing PFAS at nanogram per liter concentrations in drinking water is challenging (e.g., installing advanced treatment systems, abandoning sources of water supply, forgoing other infrastructure investments). In many if not most instances, the long-term financial implications will be borne by water system ratepayers not the entities that introduced PFAS into the water supply. Timely action by EPA and its federal partners is needed to recognize and address the fears that currently exist. Communities and individual households need consistent and thoughtful communication of the known risks posed by PFAS, the regulatory processes that are underway to manage significant sources of risk, and assistance understanding risk assessment and risk management principles – including how the risk assessment process addresses suspected risks.

Evaluate setting an SDWA standard. Several PFAS compounds are on the Safe Drinking Water Act Contaminant Candidate List and there is a body of information on occurrence of some PFAS compounds in public water supplies. AWWA supports EPA’s proposal to evaluate PFOA and PFOS for regulation under SDWA while we reserve judgement on the advisability of a national primary standard. SDWA provides for a thorough and transparent analysis that is essential to making sound risk management decisions.^{2, 3}

Currently several states have set or are considering setting drinking water standards for PFAS compounds. States are making these policy decisions in the absence of a broader strategy to effectively manage PFAS exposure and with only the information that can be organized using limited available state resources. States SDWA primacy agencies and public water systems rely on EPA to provide reliable and balanced information to guide local drinking water risk management decisions. It is appropriate for individual states to set state-specific regulatory requirements, but it is important that drinking water standards, state and federal, are set on the best available science and provide meaningful opportunities for public health protection. Effective ongoing communication with impacted entities, state primacy agencies and water systems, about what is known and not known about PFAS, new information as it arises, and

¹ USEPA News Release, 05/23/2018, accessed July 8, 2018 at <https://www.epa.gov/newsreleases/historic-epa-summit-provides-active-engagement-and-actions-address-pfas>

² 42 USC 300g–1(b)(1)(B)

³ 42 USC 300g–1(b)(2)

progress on ongoing efforts would help states and water systems make better risk management decisions.

Need to Determine PFAS Exposure Risk for Most Americans

Locations where individual home wells and community wells are contaminated with PFOA, PFOS, and other PFAS contaminants must be evaluated and addressed. Nationally, it is equally important to address other routes of exposure.

If initial EPA, Agency for Toxic Substances and Disease Registry, and state evaluations of PFAS compounds toxicity bear out, then the relatively infrequent exposure at levels of concern through drinking water is only a small part of public exposure to PFAS. PFOA and PFOS can still find their way into industrial and consumer products, PFAS compounds more broadly are in numerous product in commerce, and there are multiple routes of exposure to PFAS other than drinking water (e.g., food, dust, inhalation). If PFAS exposure at nanogram per liter levels in drinking water warrant immediate “do not drink” orders then additional actions are needed to manage exposure beyond the action items identified by EPA at the National Leadership Summit. AWWA recommends EPA:

1. Utilize EPA’s authority under the Toxic Substances Control Act to restrict exposure potential and obtain information to support decision-making,
2. Engage other federal agencies to provide useful data and evaluate exposure reduction strategies,
3. Commit to a sound risk communication strategy that guides households and businesses toward cost-effective exposure reduction.
4. Leverage and organize the efforts of all of the federal agencies that have resources to bear on effective PFAS risk characterization and mitigation.
5. Provide a framework for close coordination within EPA offices, between federal agencies, and with state and local entities on communicating risks posed by PFAS.

Engage other federal agencies. It is not reasonable for EPA to bear the entire federal burden of responding to public concern associated with PFAS. The Food and Drug Administration approves the use of PFAS in food. The Occupational Safety and Health Administration has a duty to provide guidance to monitor for and reduce workplace hazards. The Department of Homeland Security’s Federal Emergency Management Agency is responsible for providing information and guidance to the nation’s firefighters (e.g., use of aqueous firefighting foam). The Department of Defense and General Services Administration oversee hundreds of federal facilities where PFAS-products, including AFFF systems, are installed. The National Toxicology Program at the National Institutes of Health is undertaking PFAS health effects research and is capable of supporting additional research. The Centers for Disease Control, particularly the ATSDR, is engaged in evaluating available data to inform risk assessors. There is tremendous capacity within the federal government to better characterize the risks posed by PFAS and address all pertinent routes of exposure to PFAS. EPA’s PFAS Management Plan would be inadequate if it failed to both leverage and organize the efforts of all of the federal agencies that have resources to bear on effective PFAS risk characterization and mitigation.

Risk communication. A recurring top priority for all stakeholders engaged in the National Leadership Summit was effective risk communication. Themes raised included:

1. Clear communication about the risks posed based on the available toxicology and the relative risk from drinking water and other sources of exposure,
2. Consistent messaging across all agencies,
3. Effective guidance for individual households contemplating actions to reduce exposure, and
4. Complete information on exposure from all relevant sources.

The Action Plan should provide a framework for close coordination within EPA offices, between federal agencies, and with state and local entities on communicating risks posed by PFAS.

On June 20 ATSDR released new risk assessments for perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), perfluorohexane sulfonic acid (PFHxS), perfluorodecanoic acid (PFDeA). It was not clear from the ATSDR docket that ATSDR was working in close collaboration with EPA in characterizing the risks posed by PFAS compounds. Nor did the ATSDR release frame PFAS exposure holistically in an actionable manner for potentially impacted households and businesses. If EPA anticipates releasing additional PFAS compound risk assessments, more effort is needed to quantify exposure to PFAS via all exposure pathways, not just drinking water.

Adequate Toxicology Research to Support Decision-Making

The PFAS Management Plan should include:

1. Collecting and thoroughly evaluating occupational epidemiology studies from highly exposed workers to inform extrapolation of risk to PFOA, PFOS, and potentially other PFAS low-dose exposure populations.
2. Compiling PFAS chemical structure and associated physical and chemical properties data as possible and making that data available in publicly accessible formats as soon as possible, and to update the publicly available resources in a timely fashion.
3. Preparing and maintaining a public tracking system for the specific new and ongoing research federal agencies are conducting, the anticipated use of the research results, and a timely accounting of the status of that work.
4. A strategy to obtain funding to develop a sound scientific premise for risk management strategies that addresses risk management across all relevant routes of exposure in prioritized manner that provides effective and efficient risk reduction to the American public.
5. A practice of engaging stakeholders in productive dialogue on the technical challenges to evaluating the risks posed by PFAS and developing appropriate policy and engineering solutions.

Determine which subset of PFAS are of concern. During the National Leadership Summit, the lack of adequate toxicological information to distinguish which subgroups of PFAS compounds warrant monitoring and additional risk management repeatedly emerged as a top priority from a broad cross-section of stakeholders present. A clear understanding of which PFAS compounds are of public health significance is central to both effectively communicating with the public and determining the utility of managing specific environmental exposures. Understanding the likely toxicities of PFAS compounds in

the context of all routes of exposure will guide risk management through a cross-section of federal agency and state programs, as well as individual decisions by households and businesses.

Increase transparency of federal efforts. The PFAS family of chemicals has a number of commonalities, but there is also considerable divergence in chemical structure and as a consequence in physical and chemical properties. It is those properties that impact environmental fate and transport, toxicity in the human body, and the effectiveness of treatment strategies to control occurrence. If EPA is going to support a transparent risk assessment and risk management process, it will need to compile and make as much of this data available in publicly accessible formats as possible, and to update the publicly available resources in a timely fashion. EPA will not be able to develop and support such an effort alone; it will need the support of FDA, DOD, and ATSDR.

The PFAS management plan should include a mechanism for the states, water systems, and the public to understand what specific new and ongoing research federal agencies are conducting, the anticipated use of the research results, and a timely accounting of the status of that work. Presentations presented at the National Leadership Summit suggested that efforts are underway in multiple EPA offices and other federal agencies but there was little information on specific anticipated work products or anticipated schedules for ongoing and planned research. As the public is demanding transparency from drinking water systems about the levels of PFAS compounds in the water they consume, decision-makers at the local level need similar transparency as to the progress of federal efforts to better understand which PFAS compounds are of concern.

Since the National Leadership Summit the only EPA office to provide more detailed information to the public on its PFAS work supporting risk management decisions has been the Office of Water, Technical Support Center. In collaboration with individual ORD researchers working on analytical methods for PFAS compounds, this office held a public meeting and solicited stakeholder comments on its analytical methods development activities. AWWA applauds TSC for engaging stakeholders in a meaningful way and encourages all EPA offices and other involved federal agencies to engage stakeholders in productive dialogue on the technical challenges to evaluating the risks posed by PFAS and developing appropriate policy and engineering solutions.

Effective Mitigation of Sources of Harmful PFAS Compounds

The PFAS Management Plan should include:

1. A timely, careful evaluation of how PFOA, PFOS, and other PFAS compounds can be most appropriately managed under CERCLA and RCRA.
2. A commitment by the EPA TSCA program to obtain data on all PFAS compounds currently in commerce and make as much of the data relevant to toxicological and exposure assessments available to other involved federal offices and the public by a date certain.
3. A strategy to utilize TSCA program to identify sites where PFAS is manufactured or used so that environmental assessments of exposure (e.g., water, air, soil) can be targeted effectively by EPA, states, researchers, CWA pre-treatment programs, public water systems, and others.
4. A strategy for utilizing TSCA to reduce or remove the introduction of PFAS compounds that are identified as problematic through the national strategy from commerce.

5. Integration of evaluation criteria in TSCA new chemical review processes that will prevent the introduction into commerce of PFAS compounds that pose risks identified as warranting management through the national strategy.

Evaluating listing PFOA and PFOS under CERCLA and RCRA is Complex. EPA indicated it was evaluating listing PFOA and PFOS as hazardous substances under CERCLA and developing clean up levels. This evaluation should be carefully constructed so that the unintended consequences of EPA action are on balance beneficial. CERCLA and RCRA are key mechanisms to both ensure adequate containment of PFOA and PFOS when at disposal sites and to achieve adequate clean-up of contaminated sites that are releasing PFOA and PFOS that is impacting water supplies, but it also has other impacts. Depending on EPA's approach, waste streams from drinking water treatment processes could be identified as hazardous wastes and further increasing the costs of treatment to remove PFAS compounds. EPA could also compromise existing waste management practices for water and wastewater treatment facilities beyond those where there is a clear linkage between the PFOA and PFOS contamination and a specific responsible party. If EPA identifies PFOA and PFOS as appropriate to regulate under these statutes, a key performance objective is that the federal regulatory requirements are applied in a manner that provides effective protection of public water supplies without creating unintended barriers to protecting public health by water and wastewater systems.

Groundwater cleanup recommendations must be consistent with drinking water health advisories. Public concern is very high where existing PFOA and PFOS releases have contaminated aquifers used by private wells and community water system supplies. The RCRA and CERCLA programs would be well served to develop clean-up standards. Since EPA has already released drinking water advisories, it is important that any clean up recommendations be consistent with the drinking water advisories. The persistent and mobile nature of PFOA and PFOS is a significant factor in the development of the current drinking water advisories – while individual site remediation considers site-specific considerations, EPA's direction to states and regions under RCRA/CERCLA should reduce to the extent possible impacts on households with private wells and community water systems.

Use of TSCA authority. EPA alluded to the use of its authority under TSCA to collect additional data but has not committed to the effective use of this authority.⁴ EPA has evaluated almost 900 new PFAS compounds in the last 11 years, some number of which were approved for introduction into commerce.⁵ Through TSCA EPA can obtain additional information on chemical toxicity, chemical properties relevant to fate and transport, analytical methods, and manufacture and use sites. TSCA presents an opportunity to gather data and evaluate new and previously approved PFAS compounds that can inform managing exposure through all routes of exposure.

Information to Support Engineering Decisions

The PFAS Management Plan should include:

⁴ USEPA, Presentation by Jeff Morris, accessed July 9, 2018 at https://www.epa.gov/sites/production/files/2018-05/documents/pfas_summit_jeff_morris_22_may_2018.pdf

⁵ Ibid

1. A mechanism for an ongoing robust dialogue among all of the parties that play a role in advancing and implementing risk management solutions for PFAS exposure.
2. Analytical method development on (1) individual PFAS compounds and groups of PFAS compounds that pose a substantial health risk and (2) analysis of complex matrices, particularly industrial wastewaters.

Ongoing, open and transparent dialogue with the sector. The federal government does not actually implement risk management. Risk management is accomplished by manufacturers, water systems, pre-treatment program operators, product users, and waste site remediation providers. The lack of a free flow of information between the federal agencies and entities that have a role in effecting risk management in practice (1) slows adaption of risk management strategies, (2) creates roadblocks to implementation by not fully considering unintended consequences of policy decisions, and (3) eliminates the possibility of finding win-win opportunities that could accelerate the identification of key problems and associated solutions. The national action plan should include a mechanism for an ongoing robust dialogue among all of the parties that play a role in advancing and implementing risk management solutions for PFAS exposure.

Analytical methods, target analytes, and quantitation limits. Current analytical method development both within EPA and more broadly is focused on analysis (1) of drinking water, (2) looking for PFAS compounds that are receiving media attention, and (3) by adapting existing methods. In contrast a management plan driven approach would focus method development on (1) individual PFAS compounds and groups of PFAS compounds that may pose a substantial health risk and (2) analysis of complex matrices, including consumer and food products, dust/soil, and industrial wastewaters.

Reliable performance expectations for treatment technologies. When drinking water treatment, wastewater treatment, and air pollution control systems are tasked with removal of a contaminant, engineers need sufficient information to design those systems. Technology selection and design is constrained by a number of factors including: (1) what are the contaminants targeted for removal; (2) what are the reduction targets (e.g., target concentrations, net reduction, mass loading, etc.); (3) the sensitivity, specificity, and reliability of analytical methods for the target contaminants (or a suitable surrogate); (4) the influent contaminant concentration; (5) what other characteristics or constituents in the influent stream will affect removal of target contaminants; (6) the necessary reliability of system performance; and (7) how will including a treatment technology impact other treatment, system operations, and other unintended consequences. With respect to drinking water treatment, general engineering practice is to apply additional conservative design assumptions to ensure that treatment is reliably achieved. This additional conservatism is added after engineers and local policy makers understand state and federal guidelines, consequently federal efforts to explore the above factors should actively engage the practicing, expert water community.

All of the active PFAS treatment solutions for drinking water are very expensive. And, none of the treatment alternatives are without ancillary considerations and impacts. Most importantly, treatment techniques do not remove all PFAS compounds equally nor remove any PFAS compound completely. It is important that the drinking water treatment design engineers, waters system operators, and state primacy agencies share a common set of expectations for treatment performance. As noted previously,

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actively engage the practicing, expert water community is the best mechanism to realize these common expectations.

Thank you for the opportunity to comment on EPA's National Action Plan for PFAS. AWWA members are already actively engaged in the communities they served, talking with customers about PFAS and considering additional drinking water treatment and alternative water supplies where recognized PFAS contamination is found. Consequently, AWWA is very interested in providing the best available information to our members in as timely a manner as possible. Likewise, the experience of our membership could be a useful source for insights into real-world considerations and research developments. AWWA stands ready to assist EPA in advancing the National PFAS Action Plan. If you have any questions regarding this correspondence or if AWWA can be of assistance in some other way, please contact me or Steve Via at (202) 326-6130 or svia@awwa.org.

Best regards,



G. Tracy Melhan, III

Executive Director – Government Affairs

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Who is AWWA

The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our membership includes more than 4,000 utilities that supply roughly 80 percent of the nation's drinking water and treat almost half of the nation's wastewater. Our 50,000-plus total membership represents the full spectrum of the water community: public water and wastewater systems, environmental advocates, scientists, academicians, and others who hold a genuine interest in water, our most important resource. AWWA unites the diverse water community to advance public health, safety, the economy, and the environment.